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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,367	09/23/2003	Zhikai Jeffrey Wang	2003_1363A	9197

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EXAMINER

GORR, RACHEL F

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/667,367	WANG ET AL.	
	Examiner	Art Unit	
	Rachel F. Gorr	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12-17-03, 1-26-05</u> | 6) <input type="checkbox"/> Other: ____ |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 11-16 20-23 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Okamoto (JP2001310926).

Okamoto discloses an acrylic urethane acrylate oligomer made from an acrylic diol, a diisocyanate and a hydroxyalkyl acrylate (see example one of paragraph 46 of the translation). He discloses the acrylic diol initiated with diols (paragraph 18), made from the same monomers of the claims (paragraphs 24-25), and having the same molecular weight of the claims (paragraph 26). Paragraph 27 discloses the same diisocyanates of the claims and paragraph 28 shows the same hydroxyalkyl acrylates. In the examples, he removes all the solvent and unreacted components. He makes the oligomer by first reacting diisocyanate with the acrylic polyol followed by reaction with the hydroxyalkyl acrylate. Paragraph 31 shows using this oligomer in radiation curable inks, and in paragraph 56 teaches using the oligomer without solvent.

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4. Claim 27 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Okamoto.

Okamoto discloses the invention of the claims (see above). When a reference discloses all the limitations of a claim except for a property, and the examiner can't determine if the properties are inherent (misting and adhesiveness), the burden is shifted to the applicant as in *In re Fitzgerald*, 205 USPQ 594 and MPEP 2112.

5. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto.

6. Okamoto discloses the invention of the claims but doesn't specify the kind of ink.

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the oligomer of Okamoto in any kind of ink because of the good curing properties shown by Okamoto in the examples.

8. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Pourreau (6,906,136).

9. Okamoto shows the invention of the claims but differs from this claim by not including styrene in the acrylic diol.

10. Pourreau discloses the same reactive composition as the oligomer (claim one). In col. 4, lines 32-42, he teaches using styrene in the acrylic polyol.

11. It would have been obvious to one of ordinary skill in the art at the time the invention was made for Okamoto to include styrene in his acrylic diol

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because Pourreau shows, in Table 1, good hardness, impact and adhesion properties for his cured oligomers.

12. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Reusmann (2001/313369).

13. Okamoto discloses the invention of the claims (see above) but differs from these claims by not showing a solventless method or by not first reacting the diisocyanate with the hydroxyalkyl acrylate before reacting with the acrylic diol.

14. Reusmann shows, in his example, solventless preparation of the same oligomer. On page 3, in the schematics, he shows preparing the oligomer by first reacting the diisocyanate with the hydroxyalkyl acrylate or by first reacting with the acrylic diol.

15. It would have been obvious to one of ordinary skill in the art to prepare the oligomers of Okamoto by first reacting the diisocyanate with the hydroxyalkyl acrylate because Reusmann shows it as equivalent to the process of Okamoto. It would have been obvious for Okamoto to use a solventless process per the teachings of Reusmann because it is simpler.

16. Claims 1, 5-9 and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Reusmann.

Reusmann discloses the same urethane acrylate oligomers of the claims (see example 1) made by reacting diisocyanate with hydroxyalkyl acrylate followed by reaction with an acrylic diol having a molecular weight of 1000. He discloses the same diisocyanates (paragraph 26), the same hydroxyalkyl

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acrylates (paragraph (paragraph 28)), and the same monomers for the acrylic diol (see examples). In the examples, he prepares the oligomers by a solventless method, and on page 3 in the two schematics, he shows the same two methods for making the oligomer as the claims.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel F. Gorr whose telephone number is 571-272-1072. The examiner can normally be reached on Mon., Tues., Thurs., Fri., from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R.G.
September 1, 2005


RACHEL GORR
PRIMARY EXAMINER